

## Selecting RAID for ProHelp® EPM

*This application note describes considerations when selecting a RAID level for use with your ProHelp® EPM server. For additional information, please contact the Mattec Manufacturing Department.*

### 1. Recommended RAID Level

Mattec recommends using **RAID-5** or **RAID-10** on the system's server computer.

**RAID-10** is the most effective combination of performance and fault tolerance. It is a combination of **RAID-0** and **RAID-1**. This is typically the most expensive of the differing RAID schemes. It requires at least 4 disk drives. Additional disk drives are added to the system in multiples of 2. The performance of the system is increased as additional disk drives are added.

Microsoft Windows Server has software support for various RAID schemes, but we strongly recommend that you choose a hardware-implemented solution. Most RAID configurations today are implemented using SCSI or other fast devices.

### 2. Other RAID Levels

**RAID-5** is popular because of its low cost. It provides an effective amount of fault tolerance. In modern implementations, **RAID-5** may slightly increase or slightly decrease system performance. **RAID-5** can be accomplished with as few as 3 disk drives. Additional disk drives may be added one at a time.

**RAID-1** is an acceptable alternative to **RAID-5** or **RAID-10**. It provides performance equivalent to a single disk drive (i.e., no performance increase) but it has an effective amount of fault tolerance. **RAID-1** can be accomplished with as few as 2 disk drives. Additional disk drives may be added in multiples of 2.

**RAID-0** is disk striping. It can significantly increase system performance. However, it does not provide fault tolerance or data redundancy, and can actually increase the risk of an unrecoverable fault. As such, users who are interested in **RAID-0** should instead look at implementing **RAID-5** or **RAID-10**.